AMENDMENT TO THE SPECIFICATION

On pages 16-20, please amend Table 2 as shown on pages 3-7 of this Supplemental Response.

On pages 159-162, please amend Table 11 as shown on pages 8-11 of this Supplemental response.

TABLE 2

CRY3BB* PROTEINS EXHIBITING IMPROVED ACTIVITY AGAINST SCRW LARVAE

Cry3Bb* Protein Designation	*cry3Bb** Plasmid Designation	*cry3Bb** Nucleotide Sequence Changes	Cry3Bb* Amino Acid Changes	Structural Site of Changes	Fold Increase Over WT Activity	Design Method Used
Cry3Bb.60	–	–	Δ1-159	Δα1-α3	3.6×	1, 6, 8
Cry3Bb.11221	pEG1707	A460T,C461T, A462T, C464A, T465C, T466C, T467A, A468T, A469T, G470C, T472C, T473G, G474T, A477T, A478T, G479C	T154F, P155H, L156H, L158R	lα3,4	6.4×	1, 8
Cry3Bb.11222	pEG1708	T687C, T688C, A689T, C691A, A692G	Y230L,H231S	α6	4.0×	3, 7
Cry3Bb.11223	pEG1709	T667C, T687C, T688A, A689G, C691A, A692G	S223P, Y230S	α6	2.8×	3
Cry3Bb.11224	pEG1710	T687C, A692G	H231R	α6	5.0×	7, 8
Cry3Bb.11225	pEG1711	T687C, C691A	H231N, T241S	α6	3.6×	7
Cry3Bb.11226	pEG1712	T687C, C691A, A692C, T693C	H231T	α6	3.0×	7, 8
Cry3Bb.11227	pEG1713	C868A, G869A, G870T	R290N	lα7,β1	1.9×	2, 3, 4 6
Cry3Bb.11228	pEG1714	C932T, A938C, T942G, G949A, T954C	S311L, N313T, E317K	lβ1,α8	4.1×	2, 4

Cry3Bb* Protein Designation	*cry3Bb** Plasmid Designation	*cry3Bb** Nucleotide Sequence Changes	Cry3Bb* Amino Acid Changes	Structural Site of Changes	Fold Increase Over WT Activity	Design Method Used
Cry3Bb.11229	pEG1715	T931A, A933C, T942A, T945A, G949A, A953G, T954C	S311T, E317K, Y318C	lβ1,α8	2.5×	2, 4
Cry3Bb.11230	pEG1716	T931G, A933C, C934G, T945G, C946T, A947G, G951A, T954C	S311A, L312V, Q316W	lβ1,α8	4.7×	2, 4 8
Cry3Bb.11231	pEG1717	T687C, A692G, C932T, A938C, T942G, G949A, T954C	H231R, S311L, N313T, E317K	α6; lβ1,α8	7.9×	2, 4, 7, 8, 10
Cry3Bb.11232	pEG1718	T931A, A933G, T935C, T936A, A938C, T939C, T942C, T945A, G951T, T954C	S311T, L312P, N313T, E317N	lβ1,α8	5.1×	4
Cry3Bb.11233	pEG1719	T931G, A933C, T936G, T942C, C943T, T945A, C946G, G948C, T954C	S311A, Q316D	lβ1,α8	2.2×	2, 4
Cry3Bb.11234	pEG1720	T861C, T866C, C868A, T871C, T872G, A875T, T877A, C878G, A882G	I289T, L291R, Y292F, S293R	lα7,β1	4.1×	4
Cry3Bb.11235	pEG1721	T687C, A692G, C932T	H231R, S311L	α6; lβ1,α8	3.2×	2, 4, 7, 8, 10

Cry3Bb* Protein Designation	*cry3Bb** Plasmid Designation	*cry3Bb** Nucleotide Sequence Changes	Cry3Bb* Amino Acid Changes	Structural Site of Changes	Fold Increase Over WT Activity	Design Method Used
Cry3Bb.11236	pEG1722	T931A, C932T, A933C, T936C, T942G, T945A, T954C	S311I	lβ1,α8	3.1×	2, 4
Cry3Bb.11237	pEG1723	T931A, C932T, A933C, T936C, A937G, A938T, C941A, T942C, T945A, C946A, A947T, A950T, T954C	S311I, N313H	lβ1,α8	5.4×	2, 4
Cry3Bb.11238	pEG1724	A933C, T936C, A937G, A938T, C941A, T942C, T945A, C946A, A947T, A950T, T954C	N313V, T314N, Q316M, E317V	lβ1,α8	2.6×	2, 4
Cry3Bb.11239	pEG1725	A933T, A938G, T939G, T942A, T944C, T945A, A947T, G948T, A950C, T954C	N313R, L315P, Q316L, E317A	lβ1,α8	2.8×	2, 4
Cry3Bb.11241	pEG1726	A860T, T861C, G862A, C868T, G869T, T871C, A873T, T877A, C878G, A879T	Y287F, D288N, R290L	lα7,β1	2.6×	2, 3, 4, 6
Cry3Bb.11242	pEG1727	C868G, G869T	R290V	lα7,β1	2.5×	2, 3, 4, 6, 8

Cry3Bb* Protein Designation	*cry3Bb** Plasmid Designation	*cry3Bb** Nucleotide Sequence Changes	Cry3Bb* Amino Acid Changes	Structural Site of Changes	Fold Increase Over WT Activity	Design Method Used
Cry3Bb.11032	pEG1041	A494G	D165G	α4	3.1×	2, 4, 8
Cry3Bb.11035	pEG1046	G479A, A481C, A482C, A484C, G485A, A486C, A494G	S160N, K161P, ~~P~~R162H, D165G	α4	2.7×	8
Cry3Bb.11036	pEG1047	A865G, T877C	I289V, S293P	lα7,β1	4.3×	4
Cry3Bb.11046	pEG1052	G479A, A481C, A482C, A484C, G485A, A486C, A494G, A865G, T877C	S160N, K161P, ~~P~~R162H, D165G, I289V, S293P	α4; lα7,β1	2.6×	2, 4, 8, 10
Cry3Bb.11048	pEG1054	T309A, Δ310, Δ311, Δ312	D103E, ΔA104	lα2a,2b	4.3×	8
Cry3Bb.11051	pEG1057	A565G, A566G	K189G	lα4,5	3.0×	2, 3, 4
Cry3Bb.11057	pEG1062	T309A, Δ310, Δ311, Δ312, G479A, A481C, A482C, A484C, G485A, A486C, A494G	D103E, ΔA104, S160N, K161P, ~~P~~R162H, D165G	lα2a,2b; α4	3.4×	2, 4, 8, 10
Cry3Bb.11058	pEG1063	T309A, Δ310, Δ311, Δ312, A460T, C461T, A462T, C464A, T465C, T466C, T467A, A468T, A469T, G470C, T472C, T473G, G474T, A477T, A478T, G479C	D103E, ΔA104, T154F, P155H, L156H, L158R	lα2a,2b; lα3,4	3.5×	1, 8, 10

Cry3Bb* Protein Designation	*cry3Bb** Plasmid Designation	*cry3Bb** Nucleotide Sequence Changes	Cry3Bb* Amino Acid Changes	Structural Site of Changes	Fold Increase Over WT Activity	Design Method Used
Cry3Bb.11081	pEG1084	A494G, T931A, A933C, T942A, T945A, G949A, T954C	D165G, S311T, E317K	α4; lβ1,α8	6.1×	2, 4, 8, 10
Cry3Bb.11082	pEG1085	A494G, A865G, T877C, T914C, T931G, A933C, C934G, T945G, C946T, A947G, G951A, T954C, A1043G, T1094C	D165G, I289V, S293P, F305S, S311A, L312V, Q316W, Q348R, V365A	α4; lα7,β1; β1; lβ1,α8; β2; β3b	4.9×	2, 4, 5, 8, 9, 10
Cry3Bb.11083	pEG1086	A865G, T877C, A1043G	I289V, S293P, Q348R	lα7,β1; β2	7.4×	4, 5, 9, 10
Cry3Bb.11084	pEG1087	A494G, C932T	D165G, S311L	α4; lβ1,α8	7.2×	2, 4, 8, 10
Cry3Bb.11095	pEG1095	A1043G	Q348R	β2	4.6×	5, 9
Cry3Bb.11098	pEG1098	A494G, T687C, A692G, C932T, A938C, T942G, G949A, T954C	D165G, H231R, S311L, N313T, E317K	α4; α6, 1β1, α8	7.9×	2,4,7,8

TABLE 11

DNA SEQUENCE CHANGES OF *CRY3BB GENES AND RESULTING AMINO ACID SUBSTITUTIONS OF THE CRY3BB* PROTEINS**

Plasmid	*cry3Bb** DNA Sequence	Cry3Bb* Amino Acid Sequence	Structural Site of Alteration
pEG1707	A460T,C461T, A462T, C464A, T465C, T466C, T467A, A468T, A469T, G470C, T472C, T473G, G474T, A477T, A478T, G479C	T154F, P155H, L156H, L158R	lα3,4
pEG1708	T687C, T688C, A689T, C691A, A692G	Y230L,H231S	α6
pEG1709	T667C, T687C, T688A, A689G, C691A, A692G	S223P, Y230S	α6
pEG1710	T687C, A692G	H231R	α6
pEG1711	T687C, C691A	H231N, T241S	α6
pEG1712	T687C, C691A, A692C, T693C	H231T	α6
pEG1713	C868A, G869A, G870T	R290N	lα7,β1
pEG1714	C932T, A938C, T942G, G949A, T954C	S311L, N313T, E317K	lβ1,α8
pEG1715	T931A, A933C, T942A, T945A, G949A, A953G, T954C	S311T, E317K, Y318C	lβ1,α8
pEG1716	T931G, A933C, C934G, T945G, C946T, A947G, G951A, T954C	S311A, L312V, Q316W	lβ1,α8
pEG1717	T687C, A692G, C932T, A938C, T942G, G949A, T954C	H231R, S311L, N313T, E317K	α6, lβ1,α8

Plasmid	*cry3Bb** DNA Sequence	Cry3Bb* Amino Acid Sequence	Structural Site of Alteration
pEG1718	T931A, A933G, T935C, T936A, A938C, T939C, T942C, T945A, G951T, T954C	S311T, L312P, N313T, E317N	lβ1,α8
pEG1719	T931G, A933C, T936G, T942C, C943T, T945A, C946G, G948C, T954C	S311A, Q316D	lβ1,α8
pEG1720	T861C, T866C, C868A, T871C, T872G, A875T, T877A, C878G, A882G	I289T, L291R, Y292F, S293R	lα7,β1
pEG1721	T687C, A692G, C932T	H231R, S311L	α6, lβ1,α8
pEG1722	T931A, C932T, A933C, T936C, T942G, T945A, T954C	S311I	lβ1,α8
pEG1723	T931A, C932T, A933C, T936C, A937G, A938T, C941A, T942C, T945A, C946A, A947T, A950T, T954C	S311I, N313H	lβ1,α8
pEG1724	A933C, T936C, A937G, A938T, C941A, T942C, T945A, C946A, A947T, A950T, T954C	N313V, T314N, Q316M, E317V	lβ1,α8
pEG1725	A933T, A938G, T939G, T942A, T944C, T945A, A947T, G948T, A950C, T954C	N313R, L315P, Q316L, E317A	lβ1,α8
pEG1726	A860T, T861C, G862A, C868T, G869T, T871C, A873T, T877A, C878G, A879T	Y287F, D288N, R290L	lα7,β1
pEG1727	C868G, G869T	R290V	lα7,β1

Plasmid	*cry3Bb** DNA Sequence	Cry3Bb* Amino Acid Sequence	Structural Site of Alteration
pEG1041	A494G	D165G	α4
pEG1046	G479A, A481C, A482C, A484C, G485A, A486C,A494G	S160N, K161P, ~~P~~R162H, D165G	α4
pEG1047	A865G, T877C	I289V, S293P	lα7,β1
pEG1052	G479A, A481C, A482C, A484C, G485A, A486C, A494G, A865G, T877C	S160N, K161P, ~~P~~R162H, D165G, I289V, S293P	α4, lα7,β1
pEG1054	T309A, Δ310, Δ311, Δ312	D103E, ΔA104	lα2a,2b
pEG1057	A565G, A566G	K189G	lα4,5
pEG1062	T309A, Δ310, Δ311, Δ312, G479A, A481C, A482C, A484C, G485A, A486C, A494G	D103E, ΔA104, S160N, K161P, ~~P~~R162H, D165G	lα2a,2b α4
pEG1063	T309A, Δ310, Δ311, Δ312, A460T, C461T, A462T, C464A, T465C, T466C, T467A, A468T, A469T, G470C, T472C, T473G, G474T, A477T, A478T, G479C	D103E, ΔA104, T154F, P155H, L156H, L158R	lα2a,2b lα3,4
pEG1084	A494G, T931A, A933C, T942A, T945A, G949A, T954C	D165G, S311T, E317K	α4, lβ1,α8

Plasmid	*cry3Bb** DNA Sequence	Cry3Bb* Amino Acid Sequence	Structural Site of Alteration
pEG1085	A494G, A865G, T877C, T914C, T931G, A933C, C934G, T945G, C946T, A947G, G951A, T954C, A1043G, T1094C	D165G, I289V, S293P, F305S, S311A, L312V, Q316W, Q348R, V365A	α4, lα7,β1 β1, lβ1,α8 β2, β3b
pEG1086	A865G, T877C, A1043G	I289V, S293P, Q348R	lα7,β1, β2
pEG1087	A494G, C932T	D165G, S311L	α4, lβ1,α8
pEG1095	A1043G	Q348R	β2